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THE IDENTITY OF URTICA SUBINCISA BENTH. VAR. FLORIBUNDA WEDD. AND THE PRESENCE OF U. URENS L. IN MADEIRA

By J. R. PRESS *

With 2 figures

ABSTRACT. *Urtica subincisa* Benth., originally described from Mexico, is said to occur in the Madeiran archipelago under the name var. *floribunda* Wedd. The results of a detailed comparison of material of these two taxa, together with *U. urens* L. and *U. stachyodes* Webb, are given and the need for a reappraisal of both the identity and status of var. *floribunda* is pointed out. The new name *U. portosanctana* J. R. Press is chosen and a description of the species given. Finally, the presence of *U. urens* in Madeira is confirmed.

RESUMO. No presente trabalho, *Urtica subincisa* Benth., originalmente descrita do México, é mencionada para a Madeira sob o nome var. *floribunda* Wedd. São apresentados os resultados de comparação detalhada de material destes dois taxa, conjuntamente com *U. urens* L. e *U. stachyodes* Webb e é realçada a necessidade duma nova investigação sobre a identidade e o status da var. *floribunda*. É descrita uma nova espécie sob o nome de *U. portosanctana* J. R. Press. Finalmente é confirmada a presença de *U. urens* na Madeira.

Most authors consider the genus *Urtica* to be represented in the Madeiran archipelago by three species, one perennial, *U. morifolia* Poiret, and two annuals, *U. membranacea* Poiret and *U. subincisa* Benth. *U. mem-*

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branacea is easily recognised by the two large, caducous stipules at each node and the male and female flowers borne in separate racemes. *U. subincisa* has four small, persistent stipules at each node and androgynous racemes (i.e. with male and female flowers in the same raceme). The latter was first recorded from the islands by Weddell (1869) who described a specimen from Porto Santo as a new variety, var. *floribunda* Wedd.; the species is otherwise restricted to the higher parts of the central valley of Mexico (Woodland, *pers. comm.*).

While preparing an account of *Urtica* for the forthcoming Flora of Madeira, it became clear that the Mexican and the Porto Santoan and Desertan plants differ considerably from each other.

Mexican plants of *U. subincisa sensu stricto* are up to 120 cm high, hispid and with stinging hairs; stipules four per node; leaves ovate, deeply and coarsely toothed, the terminal tooth 2-4 times as long as the laterals which extended to, but not around, the cuneate to rounded or truncate base, not reaching the petiole (fig. 1a); cystoliths punctiform; racemes c. 1 cm, androgynous and cylindrical, seldom longer than the petiole in fruit; perigonium segments densely hispid on the back; achenes pale, 1.5-1.7 mm long, more or less elliptical (fig. 2a).

Porto Santoan and Desertan plants (var. *floribunda*) are similar in indumentum, stipule number, inflorescence type and cystolith shape but share none of the other characters of *U. subincisa sensu stricto*. The plants are smaller, less than 50 cm high, with leaves crenate and with the terminal tooth equal to the laterals which extended all the way around the rounded to subcordate base to the petiole (fig. 1b). The infructescence is comparatively long, up to 6 cm, and generally exceeds the petiole; the perigonium segments are only sparsely hispid on the back, though sometimes with a ciliate margin. The achenes (fig. 2b) are 1.0-1.2 mm, triangular-ovate, grey-brown and finely punctulate. Achene characters are diagnostic within *Urtica* and triangular-ovate achenes of the type found in Porto Santoan and Desertan plants do not occur in native Mexican and N. American species (Woodland, *pers. comm.*). Taken together with the other differences given above, there is no basis for regarding New and Old World plants as conspecific.

What, then, is the identity of plants from the Madeiran archipelago? The combination of four stipules per node, lax, androgynous racemes, punctiform cystoliths and triangular-ovate achenes set them apart from most other annual species of *Urtica*, but there are similarities with two other species, *U. urens* L. and *U. stachyodes* Webb.

U. urens, a widespread weed native to Europe and Asia and introduced into many other parts of the world, shares all of these characters and is similar in general appearance to Porto Santoan and Desertan plants.

Consistent differences between *U. urens* and var. *floribunda* are found in leaf shape, shape and extent of the lateral teeth of the leaves and, most notably, in the size of the achenes. Those of *U. urens* (fig. 2d)

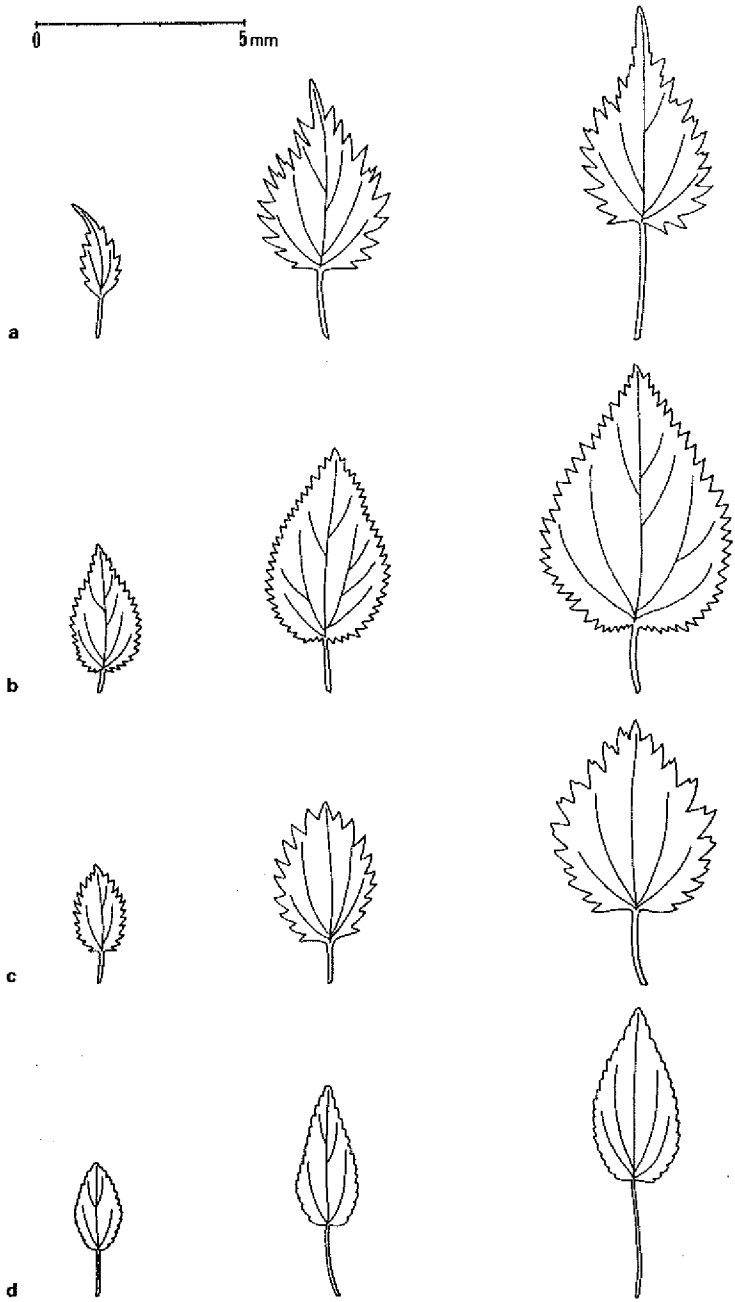

Fig. 1. — Leaf outlines a) *U. subincisa* Benth; b) *U. portosanctana* Press; c) *U. urens* L.; d) *U. stachyodes* Webb.

are 1.6-1.7(-2,5) mm long while, those of var. *floribunda* (fig. 2b) are only 1.0-1.2 mm. The leaves of *U. urens* (fig. 1c) are dentate, often coarsely so, and even in small leaves the teeth are generally more falcate or curved on the outer edge than in var. *floribunda* in which the teeth are straight or equally curved on both sides (fig. 1b). As in *U. subincisa sensu stricto*, the lateral teeth in *U. urens* extend to, but not around, the cuneate to rounded base of the leaf. The infructescence is shorter in *U. urens*, being 1-2 cm long. and does not usually exceed the length of the petiole but this character varies throughout the range of the species and is not wholly reliable.

U. stachyodes, an apparently rare species from the Canaries, is also similar to var. *floribunda* in stipule number, cystolith and achene shape and infructescence length. It differs in having narrower leaves with blunter,

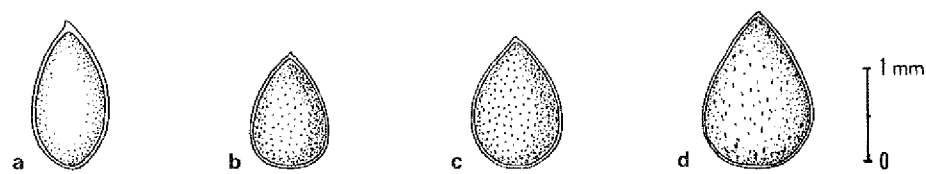

Fig. 2. — Achenes a) *U. subincisa* Benth.; b) *U. portosanctana* Press; c) *U. stachyodes* Webb; d) *U. urens* L.

shallower teeth which extend to the truncate or rounded base but do not reach the petiole (fig. 1d). The middle and lower inflorescences are androgynous and cylindrical but the uppermost are male and secund. Finally the achenes (fig. 2c) are intermediate in size between those of var. *floribunda* and *U. urens*, being 1.3-1.4 mm long.

These differences suggest that, while similar to *U. urens* and *U. stachyodes*, var. *floribunda* is no better placed under either name than under *U. subincisa*. The best solution to the identity of plants from the Madeiran archipelago seems to be to regard them as forming a closely related, but distinct, species, for which the following name is proposed.

Urtica portosanctana (Wedd.) J. R. Press nom. nov.

Urtica subincisa Benth. var. *floribunda* Wedd. in DC., Prodr. 16(1):44 (1869), non *U. floribunda* Kunth (1817).

A U. urenti L. foliis subcordatis, dentibus petiolo attingentibus, inflorescentia demum petiolo superanti, a U. stachyode Webb foliis latioribus, dentibus acutioribus, ab ambosus acheniis parvioribus, differt.

Sparsely hispid, setose annual up to c. 40 cm. Stipules 1.5-2 mm, 4 at each node. Leaves ovate, acuminate, subcordate, evenly toothed, the teeth more or less straight or slightly curved on both sides, extending

around base of leaf to petiole; cystoliths punctiform. Inflorescence androgynous, 1.5-6 cm, lax, more or less cylindrical, exceeding the petiole in fruit. Achenes 1.0-1.2 x 0.8-0.9 mm, triangular-ovate, grey-brown, finely punctulose.

Type: Mandon 227, Maio 1866, In rupestribus insulae Porto Santo ad Ilheo de Cima (BM).

In dry, rocky places, on cliffs and dry slopes near the sea. Endemic to the Madeiran archipelago: Porto Santo (including Ilhéu de Cima, Ilhéu de Baixo); Ilhas Desertas (Ilhéu Chão, Deserta Grande, Bugio); Madeira (Ilhéu de Fora of the Ponta de São Lourenço only); Ilhas Selvagens (Selvagem Grande, introduced?).

U. urens

Two authors have recorded *U. urens* from Madeira. Ascherson & Graebner (1917) included Madeira within the distribution of a stingless variety, *U. urens* var. *iners* (Forsskal) Wedd. Plants from both Porto Santo and the Desertas are certainly not of this type, being densely armed with setae which deliver a powerful sting! Grabham (1935) also reported *U. urens* as common in Madeira though his plants were described as having stinging hairs. His somewhat cursory description "Annual, glabrous except for stinging hairs. Leaves ovato-oblong, coarsely serrate. Flowers in panicles, 2-sexual, axillary. Common up to 2,000 ft" seems to apply to this species rather than any other. However, neither of these additions to the Madeiran flora were taken up by later authors (Menezes (1914), Pickering (1962), Hansen (1969), Hansen & Sunding (1985)) who all list *U. membranacea* and *U. subincisa* (= *U. portosanctana*) as the only annual species present on the islands. Despite its omision from most species lists, *U. urens* undoubtedly does occur on the islands, as claimed by Grabham. Indeed it would be mildly surprising if this widespread weed had not, at some stage, been introduced there in the same way it has followed man to most other temperate parts of the world. Whether it was ever "common" as Grabham states is open to question; there is only a single specimen from Madeira (Moniz s. n., Calhau, March 1889) at K, and a second, from Porto Santo (Lowe 180, Roadside by a cottage above Câmara, 24th. April 1855) at BM. Species of *Urtica*, along with similar ruderal and weedy species are often overlooked or ignored by collectors (especially modern collectors) and *U. urens* may well still be found in and around much of the cultivated land of Madeira and Porto Santo.

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NOTES ON TWO MADEIRA PLANTS

By N. C. H. Krauss [1]

The composite plant «Abundância» (*Eupatorium adenophorum* Spreng.) has been known in Madeira for many years. On July 24, 1962 I collected a second species of *Eupatorium*, *E. riparium* Schultz-Bip., confirmed by the Royal Botanic Garden, Kew, England. This was growing in association with *E. adenophorum* in a damp area along a path near Monte. Both these species of *Eupatorium* are native to Mexico. I have seen *E. riparium* growing along a small stream in a ravine at the Desierto de los Leones, Distrito Federal, in the hills above Mexico City. Both species are pests in grazing land in Hawaii.

On November 7, 1960 I collected specimens of *Ulex minor* Roth (determined by Royal Botanic Garden, Kew) in the grassy hills above Ribeiro Frio. Since then I have seen it also at Encumeada and Santo da Serra. *Ulex europaeus* L. has been known in Madeira for a long time, but I have not seen any records of *U. minor*.

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